

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Omar Amin on 25 February 2011.

The application has been amended as follows:

Claims 1, 7, 9, 10, 16, 18, 25, 27, 34, 38-41 have been amended as:

1. (Currently Amended) A method of structuring interactive content for hardware devices, comprising the steps of:

determining display and memory parameters of a device based on device information;

parsing requested content including a plurality of pages into a document having a plurality of objects;

laying out said document according to said display and memory parameters of said device;

generating a document table for said document;

inputting said document and said document table into a content stream, wherein said document table includes object pointers corresponding to respective objects of the plurality of objects, wherein each object pointer includes an attribute pointer that points to a respective object in said content stream **and a vtable pointer for accessing an instance method associated with the respective object**; and

transmitting said content stream to said device;

wherein said device receives said content stream and uses an attribute pointer that points to an object of said document included in said content stream to selectively access and copy said object from said content stream to a writable memory of said device, thereby enabling notification of said object without copying said entire document to said writable memory of said device, and wherein said attribute pointer is part of an object pointer from said document table in said content stream.

7. (Currently Amended) The method of claim 1, ~~further comprising the step of:~~  
~~storing wherein said device is content stream on a hardware device.~~

9. (Currently Amended) The method of claim 1, wherein said content stream is stored on said device, further comprising modifying said object, comprising the steps of:

accessing said object pointer corresponding to said object, ~~wherein said object pointer further comprises a vtable pointer for accessing instance methods associated with said object;~~

copying said object to writeable memory space;

altering said copied object with ~~said~~ an instance method ~~methods~~ accessed using ~~said~~ a vtable pointer of said object pointer; and

updating said attribute pointer ~~of said object pointer~~ to point to the writeable memory space of said object that has been altered.

10. (Currently Amended) A computer system of structuring interactive content for hardware devices, comprising:

a module to determine display and memory parameters of a device based on device information;

a module to parse requested content including a plurality of pages into a document having a plurality of objects;

a module to lay out said document according to said display and memory parameters of said device;

a module to generate a document table for said document;

a module to input said document and said document table into a content stream, wherein said document table includes object pointers corresponding to respective objects of the plurality of objects, wherein each object pointer includes an attribute pointer that points to a respective object in said content stream and a vtable pointer for accessing an instance method associated with the respective object; and

a module to transmit said content stream to said device;

wherein said device receives said content stream and uses an attribute pointer that points to an object of said document included in said content stream to selectively

access and copy said object from said content stream to a writable memory of said device, thereby enabling notification of said object without copying said entire document to said writable memory of said device, and wherein said attribute pointer is part of an object pointer from said document table in said content stream.

16. (Currently Amended) The system of claim 10, ~~further comprising:~~ **wherein said device is a module to store content stream on** a hardware device.

18. (Currently Amended) The method of claim 1, wherein said content stream is stored on said device, further comprising modifying said object, comprising the steps of:  
a module to access said object pointer corresponding to said object, ~~wherein said object pointer further comprises a vtable pointer for accessing instance methods associated with said object;~~

a module to copy said object to writeable memory space;

a module to alter said copied object with said ~~an~~ instance **method** ~~methods~~ accessed using said ~~a~~ vtable pointer **of said object pointer**; and

a module to update said attribute pointer ~~of said object pointer~~ to point to the writeable memory space of said object that has been altered.

19. (Currently Amended) A tangible, computer program product comprising a computer usable medium having control logic embodied in said medium that. when

executed by a computer, causes the computer to perform operations to structure interactive content for hardware devices, said operations comprising:

determining display and memory parameters of a device based on device information;

parsing requested content including a plurality of pages into a document having a plurality of objects;

laying out said document according to said display and memory parameters of said device;

generating a document table for said document;

inputting said document and said document table into a content stream, wherein said document table includes object pointers corresponding to respective objects of the plurality of objects, wherein each object pointer includes an attribute pointer that points to a respective object in said content stream **and a vtable pointer for accessing an instance method associated with the respective object**; and

transmitting said content stream to said device;

wherein said device receives said content stream and uses an attribute pointer that points to an object of said document included in said content stream to selectively access and copy said object from said content stream to a writable memory of said device, thereby enabling notification of said object without copying said entire document to said writable memory of said device, and wherein said attribute pointer is part of an object pointer from said document table in said content stream.

25. (Currently Amended) The computer program product of claim 19, ~~said operations further comprising the step of: storing~~ wherein said device is content stream on a hardware device.

27. (Currently Amended) The computer program product of claim 19, wherein said content stream is stored on said device, said operations further comprising modifying said object of said content stream, wherein said modifying comprises:

accessing said object pointer corresponding to said object, ~~wherein said object pointer further comprises a vtable pointer for accessing instance methods associated with said object;~~

a copying said object to writeable memory space;

altering said copied object with said an instance method ~~methods~~ accessed using said a vtable pointer of said object pointer; and

updating said attribute pointer ~~of said object pointer~~ to point to the writeable memory space of said object that has been altered.

34. (Currently Amended) The method of claim 1, wherein each ~~object pointer of the document table further comprises a vtable pointer that~~ points to an a respective entry in a vtable, wherein each entry in the vtable comprises at least one function pointer that points to an instance method associated with the corresponding object, further comprising:

modifying an said object of the plurality of objects, comprising:

accessing a vtable pointer associated with the object ~~through an object~~  
pointer; and

using the vtable pointer to access an ~~the~~ instance method associated with  
the object.

38. ~~(Withdrawn)~~ **(Previously Presented)** The method of claim 1, further comprising:  
receiving a synchronization token from the hardware device; wherein at least a portion  
of data included in the content stream is determined based on the synchronization  
token.

39. ~~(Withdrawn)~~ **(Previously Presented)** The method of claim 38, wherein the  
synchronization token is a data marker representative of data stored on the hardware  
device.

40. ~~(Withdrawn)~~ **(Previously Presented)** The method of claim 38, further  
comprising: determining whether a previous transmission to the hardware device was  
successful based on the synchronization token.

41. **(Currently Amended)** A method for receiving and modifying data at a device,  
comprising:  
receiving a content stream including a document and a document table,

wherein the document includes a plurality of objects laid out according to display and memory parameters of the device, wherein the document table includes a plurality of pointers corresponding to respective objects of the plurality of objects, wherein each object pointer includes an attribute pointer that points to a respective object of the plurality of objects **and a vtable pointer for accessing an instance method associated with the respective object;**

storing at least said document in a first memory, ~~wherein said first memory is read-only memory,~~ and wherein said document cannot be modified from said first memory;

accessing an object pointer from said document table corresponding to an object of said document;

accessing an attribute pointer of said object pointer that points to said object; selectively copying said object from said first memory to a second memory using said attribute pointer, wherein the second memory is a writeable memory;

modifying said copied object in said second memory; and

updating said attribute pointer to point to said copied object in said second memory.

2. Claim 1 is now allowable. Claims 38-40, previously withdrawn from consideration as a result of a restriction requirement, require all the limitations of an allowable claim. Pursuant to the procedures set forth in MPEP § 821.04(a), **the restriction requirement**



**between species I and II, as set forth in the Office action mailed on 9/16/2009, is hereby withdrawn** and claims 38-40 are hereby rejoined and fully examined for patentability under 37 CFR 1.104. In view of the withdrawal of the restriction requirement, applicant(s) are advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

3. Since Claims 38-40 depend on Claim 1 and Claim 1 is allowable, Claims 38-40 are allowable based on it dependency.

4. The following is an examiner's statement of reasons for allowance:

Regarding amended independent claim 1 and its parallel independent claims, none of the references, either singularly or in combination, teach or suggest to a person of ordinary skill in the art at the time of the invention the combination of limitations of claim 1 including "A method of structuring interactive content for hardware devices, comprising the steps of: determining display and memory parameters of a device based on device information; parsing requested content including a plurality of pages into a document having a plurality of objects; laying out said document according to said display and memory parameters of said device; generating a document table for said

document; inputting said document and said document table into a content stream, wherein said document table includes object pointers corresponding to respective objects of the plurality of objects, wherein each object pointer includes an attribute pointer that points to a respective object in said content stream and a vtable pointer for accessing an instance method associated with the respective object; and transmitting said content stream to said device; wherein said device receives said content stream and uses an attribute pointer that points to an object of said document included in said content stream to selectively access and copy said object from said content stream to a writable memory of said device, thereby enabling notification of said object without copying said entire document to said writable memory of said device, and wherein said attribute pointer is part of an object pointer from said document table in said content stream."

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Faber whose telephone number is 571-272-2751. The examiner can normally be reached Monday-Thursday, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong, can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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